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AMMUNITION BULLETIN Nº 14.

FOR INSPECTING ORDNANCE OFFICERS.

(OCTOBER 1940).

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CHIEF INSPECTOR OF ARMAMENTS,
WOOLWICH, S.E.18.

SECURITY.

AMMUNITION BULLETIN NO. 14.

FOR INSPECTING ORDNANCE OFFICERS.

OCTOBER, 1940.

Issued by :-

Chief Inspector of Armaments,

Woolwich.

Contents:-

No.142. R.A.O.S. Part II Addendum to Pamphlet No.7.

Consequent on the adoption of Cordite W.M. the following provisional Table will govern the testing of this Cordite:-

Heat test 150°F. (minutes)	Mean temperature of storage.		
	Below 60°F.	60°F. and below 80°F.	80°F. and over.
Over 15	Retest after 3 years.	Retest after 2 years.	Retest after 1 year.
Over 10 but below 15	Retest after 2 years.	Retest after 1 year.	Retest after 6 months.
Over 5 but below 10	Carbamite test	Carbamite Test.	Carbamite test.
5 and below.	Destroy.	Destroy.	Destroy.
Carbamite test:- Over 1 per cent.	Retest after 1 year.	Retest after 1 year.	Retest after 6 months.
1 per cent. and below.	Destroy.	Destroy.	Destroy.

A few cartridges in 3 per cent. of the packages should be examined visually.

No.143. Cordite W.M. Introduction.

Cordite W.M. (Cordite W modified), which will shortly be used in the make up of certain cartridges, has been introduced in order to conserve supplies of Carbamite.

It consists of :-

Nitro-Glycerine	29.5 ± 0.6%
Nitro-Cellulose	65 "
Mineral Jelly	3.5 "
Carbamite	2.5 "

In comparison with Cordite W the size of stick is slightly larger, thus for the Q.F. 25-Pr. the size of stick is 017 instead of 016. Also it is slightly sticky to handle and a shade darker. The ballistics are the same and therefore there is no change in the charge weights.

The Code letter [E] will be used to designate Cordite W.M.

No.144. Percussion primers. Q.F. Composition for caps.

It has been decided to revert to the use of Q.F. cap composition for the filling of percussion caps in percussion primers, in place of the 6.6.4. composition previously used.

Q.F. Composition consists of :-

Sulphide of Antimony ...	18 parts by weight.
Potassium Chlorate ...	12 " " "
Mealed powder	1 " " "
Sulphur	1 " " "
Ground glass	1 " " "

Primers with caps filled with Q.F. cap composition will have the letter "Q" stamped after the date of filling. In addition packages containing Q.F. cartridges having primers fitted with Q.F. composition caps will have the letter "Q" in brackets stencilled after the Batch No. and at each end of the box.

No.145. Notes on N.C. Propellants and Containers of New (1940) American Manufacture. Figs. 35 and 37.

This N.C.T consists of short cords pierced by seven holes parallel to the cord walls.

The nomenclature to be used in our Service, e.g. N.C.T.025 can be fully interpreted as Nitro Cellulose Tubular having an average web size of 25 thousandths of an inch. American practice is to designate the size by two groups of figures e.g. N.C.140/025; in this case the figures 140 give the external cord diameter and the figures 025 give the average web size, i.e. the mean of the inner and outer web dimension (Fig. 37), again in thousandths of an inch. American designation is used in the stencilling on the containers in which the bulk propellant is supplied.

In appearance N.C.T. may be of almost any shade of brown and the colour tends to darken with age until it becomes black.

N.C.T. is very hygroscopic and for this reason it must be kept in airtight containers to give regular ballistic results. As received from America it is packed in galvanised steel containers which weigh, empty, about 40-lbs. and, when filled, about 150 lbs.

Markings and sizes of these containers are shown on Fig. 35. It will be noticed that there are two manufacturers, Hercules and Dupont. Both have started at Lot 1 and as their products are different ballistically it is essential to note the differences in stencilling used by these two manufacturers. Some of these are :-

(1) the nett contents of each container.

(2) the difference in the sizes of letter used on the sides.

(3) the contract number, as shown in the triangle at the back.

(4) the abbreviations that accompany the lot number.

Lots of Hercules powders have been numbered by the maker H.P.C. Lot 1, H.P.C. Lot 2, H.P.C. Lot 3, H.P.C. Lot 4, K Lot 5, K Lot 6 and so on. It is proposed for stencilling and record purposes to renumber the first four lots to K 1, K 2, K 3 and K 4, and so maintain a complete K series.

Lots of Dupont powders will be numbered D.U.P.1, D.U.P.2, and so on. The letters "N.H" used by this manufacturer stand for "Non Hygroscopic". This claim has not been proved and with Dupont powders the precautions to keep the propellant in air tight containers will be maintained as with Hercules powders. The letters "N H" will not be repeated in cartridge case and box stencilling.

[N] is the code letter for N.C. propellant.

No.146. Amendments to Bulletin No.13.

Item 137, Page 6, 5th para. 1st line, for "beack" read "back",
3rd line, for "deceleation" read "deceleration".

No.147.

AIRCRAFT BOMBS (INCENDIARY).

DESIGNATION	MAXIMUM LENGTH IN INCHES	MAXIMUM DIAMETER IN INCHES	SERIAL NO. & MARK OF BOX	STOWAGE DIMENSIONS IN INCHES		
				LENGTH	BREADTH	DEPTH
Bomb, Incendiary, Aircraft 4 lb. Mark II	21.4	1.67 Across flats	B.268 Mark I wood with tinned plate case Mk.II to hold 20 bombs and 1 release bar.	25.0	13.0	8.875
Bomb, Incendiary, Aircraft 4 lb. Mark II.E.	"	"	B.268, Mark I wood with tinned plate case Mk.II to hold 20 bombs 16 Mk.II & 4 Mk.II.E. & 1 release bar.	"	"	"
Bomb, Incendiary, Aircraft 32 lb. Mark I.	32.81	5.02	B.335, Mark I wood to hold 4 bombs & 1 release bar.	37.125	15.125	17.125
Bomb, Incendiary, Aircraft 40 lb. Mark I	32.71	5.02	B.322, Mark I wood; converted B.258 Mark II box. To hold 4 bombs and 2 release bars.	36.75	14.0	16.375
No.148.			BOMB, INCENDIARY (LAND SERVICE)			
Bomb, Incendiary, $1\frac{1}{4}$ lb. Mark I	7.125	2.125	P.59, Mk.II Steel; to hold 24 bombs.	19.15	8.35	7.85

with packages etc.

ESTIMATED WEIGHT OF BOX		MARKING	
EMPTY	FILLED	BOX	STORE
25 lb.	105½ lb.	No special marking on wood box; box painted red. Tinned-plate case painted black with 2 dull red 1.0-inch bands painted on the lid at one end, a space of approx. 1½ inches, between dull red bands and a ½ inch bright band painted centrally between the dull red bands.	Nose painted dull red with a black band centrally over the red, and a bright red band centrally over the black.
"	"	"	As above except than an additional bright red band is painted on at rear end of dull red painting. End of tail painted bright red.
40 lb.	170 lb.	No special marking on box. Box painted red.	Whole exterior of bomb painted dull red with a black band around nose, and a bright red band on the black.
30 lb.	205 lb.	"	"
with packages etc.			
16 lb.	46 lb.	"	Exterior of Body red. Instructions for use printed on body in black "FILLED" stencilled on lower part of body in ¼ inch black type. A number of bombs will be issued with a label affixed around body, similar in colour and with instruction as above.

No.149.

DETAILS OF BOMBS M.L. SIGNAL OR ILLUMINATING,

DESIGNATION	MAXIMUM DIMENSIONS IN INCHES. LENGTH	DIAMETER	ESTIMATED WEIGHT (FILLED) WITH CARTRIDGE.	PROPELLANT NATURE AND WEIGHT.	ESTIMATED WEIGHT AND NATURE OF BURSTING CHARGE	SERIAL NO. AND MARK OF BOX.
Bomb M.L. Signal, 2-inch, Mortar, Single Star Red, Mk.I Including 47 grain cartridge.	9.0	2.02	1-lb. 3-oz.	Cartridge M.L.Mortar 47 grain Ballistite	Gunpowder G.12 8 grains.	B.167 Mark I.
Bomb M.L.Signal, 2-inch Mortar, Single Star Green, Mk.I Including 47 grain cartridge.	"	"	"	"	"	"
Bomb M.L.Signal, 2 inch Mortar, Multi Star Red, Mk.I. Including 47 grain cartridge.	"	"	1-lb. 2¼-oz.	"	Gunpowder G.12 8 grains & ⁂ 1480 grains	"
Bomb M.L. Signal, 2 inch Mortar, Multi Star Green, Mk.I. Including 47 grain cartridge.	"	"	"	"	Gunpowder G.12 8 grains & ⁂ 1390 grains	"
Bomb M.L. Signal, 2-inch Mortar, Multi Star, Red and Green, Mk.I. Including 47 grain cartridge.	"	"	"	"	Gunpowder G.12 8 grains & ⁂ 1540 grains	"
Bomb, M.L. Illuminating with parachute, 2-inch Mortar, Mk.I. Including 47 grain cartridge.	9.62	"	1-lb. 1-oz. 14-dr.	"	Gunpowder G.12 8 grains.	"
					⁂ bursting char in Star Container.	

No.150.

DETAILS OF BOMB, SMOKE 2-INCH BOMB-THROWER,

Bomb,Smoke,2-in. Bomb-Thrower, Mark I. Including 16 grain cartridge.	9.62	2.02	2-lb. 0-oz. 4-dr.	Cartridge M.L.Mortar 16 grain Ballistite.	NIL	B.167 Mark I.

2 INCH, MORTAR WITH PACKAGES ETC.

CONTENTS OF BOX.	BOX STOWAGE DIMENSIONS			APPROX. WEIGHT OF BOX WITH FILLED BOMBS.	MARKING	
	LENGTH	BREADTH	DEPTH		BOX	STORE
3 carriers Ammn.M.L. 2 inch Mortar Mk.I each containing 6 bombs.	21.8	9.5	9.35	46 lb.	No special marking; general stencilling particulars only. Box painted Service Colour.	½ inch red band painted on body, approx. 1½ inches from nose end.
"	"	"	"	"	"	½ inch green band painted on body approx. 1½ inches from nose end.
"	"	"	"	"	"	½ inch red band painted on body approx. 1½ inches from nose end "MULTI" stencilled on in ½" black type below red band.
"	"	"	"	"	"	½ inch green band painted on body approx. 1½ inches from nose end. "MULTI" stencilled on in ½-inch black type, below green band.
"	"	"	"	"	"	Two ½-inch bands painted on body, one red and the other green. "MULTI" stencilled on in ½-inch black type between the two bands. First band (red) approx. 1½-inch from nose end.
"	"	"	"	43½-lb.	"	"ILLG. WITH PARACHUTE" stencilled on body in ¼ inch black type.
MARK I WITH PACKAGES ETC.						
3 carriers Ammn. M.L. 2-inch Mortar Mark I each containing 6 bombs.	21.8	9.5	9.35	59-lb.	No special marking; general stencilling particulars only. Box painted light green.	½-inch red band painted on body, approx. ½-inch below nose cap. 2" B.T. I stencilled on in ¼-inch black type below red band.

ENEMY AMMUNITION.

No.151. German 110 k.g. Incendiary Bomb.
Fig. 36.

This is an incendiary bomb of sheet iron containing about 16 gallons of an inflammable liquid which is scattered on impact and simultaneously ignited by a charge of 2.8 lbs. of T.N.T. Since inflammable liquids are not usually ignited by the detonation of H.E. the flash from the T.N.T. is reinforced by a quantity of charcoal and magnesium contained in two tubes of tinned iron.

One Rheinmetall fuze, enclosed in a steel sheath is used; this sheath also contains an exploder pellet of picric acid. The fuze No.(26) is to a much simpler design than the Nos.9 and 15. It is painted light green at the terminal end and contains two firing switches in parallel. One of these switches will close and fire the T.N.T. charge when the bomb hits the ground. The other switch, consisting of two metal discs set together, is positioned at the side of the fuze. Opposite these discs is a hole in the sheath to which is welded a thick soft steel tube, the other end of which enters the hole in the nose casing for a short distance. The hole in the casing is apparently left open and it is thought that when the bomb approaches or strikes the ground a pressure is set up in the tube which forces the two discs together and thus closes the switch.

The action of the bomb is, therefore, as follows:- When either of the switches is closed the bridge in the fuze fires the detonator which is set in the picric acid pellet. The exploding picric acid detonates the charge of T.N.T. The explosion of the T.N.T. breaks up the bomb and the two tubes of charcoal-magnesium composition. The liquid inflammable filling and the burning charcoal and magnesium are scattered around the crater for a distance of about 20 yards. The crater is small, about 3 feet in diameter by 2 feet deep. The glowing and burning charcoal and magnesium ensure that the scattered liquid catches fire and continues to burn.

If the fuze does not function this bomb may penetrate the ground as much as 8 to 10 feet. The bomb, being made of thin sheet iron, will have collapsed, the central steel tube containing the T.N.T. alone remaining undamaged. The fuze will probably be wrenched away from the picric acid pellet and therefore the fragements of the bomb can be pulled out or dug up. The nature of the bomb is easily recognised by the smell of petrol or benzine. If it is suspected that the bomb is only slightly damaged it must be treated as if it were an H.E. bomb fitted with a Rheinmetall fuze. After the fuze is made safe in the ordinary way the bomb should be pulled out under precautions and the contents of the central tube destroyed by explosion.

From reports received the following inflammable liquids may be met with in this bomb :-

(a) crude solvent naphtha.

(b) 50% petrol and 50% solvent naphtha coloured pink using an azo-dye.

(c) a black oil, the boiling range of which corresponds with that of a mixture of petrol with either spent lubricating oil or fuel oil.

It is considered that this bomb should allow of the use of various types of inflammable liquids provided there is a certain amount of volatile material present.

Markings. These bombs may be painted green on a red undercoat, red, or possibly camouflage red and green. The suspension ring of the nose casting and the light alloy tail ring are painted bright blue.

No.152. 250 Kg. H.E. Bomb.
Fig. 38.

This bomb, which is believed to be of Italian manufacture, was dropped at Gibraltar on 17.7.[illegible]. The inside of the bomb is varnished and filled with poured T.N.T. and fitted at the tail end with a percussion fuze. The exterior is painted greenish-grey and fitted near the centre with a lifting eye. The base is fitted with a tail-piece which is provided with inspection plates to give access to the safety pin of the percussion fuze and the nose is recessed and threaded to take a lifting eye

The percussion fuze used with the above bomb consists of the following principal points:- Tail socket, tail adapter, striker holder with safety balls and strikers and detonator holder, vanes, vane holder and upper vane spindle, drive coupling, arming spindle and safety arm and base adapter.

Action of the fuze. After the bomb is loaded on to the rack, the safety pin passing through the lower part of the drive coupling is withdrawn by hand. This is done by opening the inspection plates fitted to the funnel shaped part of the tail piece. On release from the rack, the safety pin passing through the tail adapter and upper vane spindle is withdrawn and retained by the release mechanism.

During flight, pressure of air causes the vanes to rotate in a clockwise direction. The vanes are secured, by means of a set screw, to the upper vane spindle, which is connected to the main vane spindle by a universal coupling. The lower end of the main vane spindle is attached to the drive coupling and the action of the vanes causes this to revolve on the shoulder of the base adapter.

This movement causes the arming spindle to withdraw through the internal screw-threading of the drive coupling, carrying with it the safety arm.

The safety balls are thus free to move down the incline to the centre of the striker holder releasing the latter and for the remainder of the flight the strikers are held off the detonators only by the creep spring. The detonator holder is prevented from turning by a small brass guide pin working in its vent.

On impact, the strikers holder moves forward, compressing the creep spring and carried the strikers on to the detonators.

No.153. Italian Small Arms Ammunition.

The following are particulars of machine gun ammunition taken from Italian planes brought down at Malta.

Type of bullet.	Calibre	Identification	Base marking on case.	Propellant	Composition of bullet.
Ball	12.7 m.m. (.51")	No colouring.	S.M.I.935	Fine N/C	Cupro nickel envelope, lead core, aluminium tip. One groove.
"	"	Copper coloured bullet.	B.37.	"	Copper coated N.S. envelope, lead core, aluminium tip. Two grooves.
Explosive tracer.	"	Blue band on bullet.	B.P.D.38 S.	"	Red tracer composition. Rear end streamlined.
Explosive	"	Red band on bullet.	B.P.D.38 S.	"	Brass nose, Copper envelope, Steel body.

No.153. Italian Small Arms Ammunition - (Continued)
(Contd.)

Type of bullet.	Calibre	Identification	Base marking on case.	Propellant	Composition of bullet.
Tracer	12.7 m.m (.51")	Red tip on bullet.	S.M.1.937 V	Fine N/C	Cupro-nickel envelope containing white tracer composition. Streamlined base.
Ball	7.7 m.m. (.31")	Plain bullet tip. Plain annulus.	B.P.D. 37.	N/C flakes	Cupro-nickel coated N.S. envelope. Lead core. Aluminium tip.
Armour piercing.	"	Green bullet tip. Green annulus.	S.M.1.937 R	N/C chopped stick.	Cupro-nickel coated N.S. envelope. Hard steel core. Lead sleeve.
Armour piercing incendiary	"	Blue bullet tip. Plain annulus.	B.P.D. 39	N/C flakes.	Cupro-nickel envelope, perforated. Copper sleeve. Hard steel core.
Tracer	"	Red tip. Plain annulus.	S.M.1.1935	N/C chopped stick.	Cupro-nickel coated N.S. envelope. Brass tracer capsule.

No.154. Italian Army Ammunition.

The following general notes on Italian Army Ammunition are circulated for information.

1. Propellants. The following propellants are believed to be in use :-

Ballistite (flaked)
Solenite
Cordite
Nitro-cellulose.

2. H.E. filling.

T.N.T.
Siperite
M.B.T.

3. Shell markings.

Painting.

Shrapnel	(whole shell)	Red
H.E.	" "	Light Grey (forged steel)
"	" "	Dark " (cast ")
Incendiary	(nose only)	Vermillion.
Star	(half nose)	Carmine.
Smoke	(whole ")	"
Tracer	(half ")	Black
Gas	(whole ")	Yellow.

Stencilling.

Calibre	e.g.	105/28*
Filling	"	TRITOLO
Weight	"	50 kg.
Place and date of filling	"	A.P. VIII 1938 (Arsenal Piacenza, August 1938)

* Note. All Italian artillery equipments are distinguished by two numbers separated by an oblique stroke. The first number indicates the calibre in millimetres, the second number gives the length of the bore in calibres.

No.155. PARTICULARS OF GERMAN

(a) INCENDIARY.

Designation	Typical markings.	Max. Dimensions		Wall Thickness.	Material of Body.	Material of Tail.
		Length	Diam			
1 kg. Incendiary.	R/51 RW 6 56 Bi.IV 151 M/144 117 Rh S 149 G o o	12.5/16"	2"	0.4"	Electron	Tin plate
G.C.50 Incendiary.	-	3½'	8"	4 m/m	Pressed Steel	-
B.I.E.1 Electron Incendiary.	-	350 m/m	50 m/m	-	Electron	-
12 kg. Incendiary.	-	60 m/m	16½ m/m	-	Electron 80% Mag. 20% Alum.	-
C 250 (Flam.) Incendiary	-	5'3"	14½"	-	Sheet Steel.	Sheet Steel

(b) GAS.

15 kg. Gas and Phosphorous.	-	-	-	-	-	-
20 kg. Gas and Phosphorous.	-	-	-	-	-	-
25 kg. Gas and Phosphorous.	-	-	-	-	-	-
G.C. 10 Gas.	-	2'	3½"	-	Pressed or Cast Steel.	-

(c) ANTI-PERSONNEL.

2 kg. Anti-personnel	-	-	-	-	-	-
5 kg. Anti-personnel	-	-	-	-	-	-

AIRCRAFT BOMBS

Explosive or Incendiary Filling.	Weight Filling	Total Weight	C/W Ratio	Fuze.	Exploder	Remarks
Thermit	200 grams.	1 kg.	-	Percussion cap with Striker	-	O.B.Proc.3957
Thermit	19 kg.	30 kg.	-	Rheinmetall Electric (Inst.)	300 grains G.R.F. 88 (Picric Acid)	I.O.O.Bulletin No.5.
Thermit	0.25 kg.	9 kg.	-	Percussion cap with Striker	-	do.
Thermit	8½ kg.	-	-	do.	-	do.
Crude Solvent Naphtha or Naphtha and Petrol or Petrol and Crude Oil.	50 kg.	110 kg.	-	Rheinmetall Electric No.26 Incorporating Pressure Switch for above ground effect.	2.8 lbs.T.N.T. Igniter Mag. 78% Charcoal 15% Alum & iron 1%	O.B.Proc. 7889.
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
Alternatives Tear Gas Arsenic Compound Chlorine Lewisite	-	-	-	-	-	I.O.O.Bulletin No.5.
-	-	-	-	-	-	-
-	-	-	-	-	-	-

No.155 (contd.) PARTICULARS OF GERMAN

(c) ANTI-PERSONNEL - (continued)

Designation	Typical Markings.	Max. Dimensions Length	Max. Dimensions Diam.	Wall Thickness.	Material of Body.	Material of Tail.
S.C.10 Anti-personnel	-	2'	3½"	Not known. Body produces about 700 frags. Density: Approximately 1 frag. per square m. at 25 m.	-	-
S.T. 10 Anti-personnel.	-	2'(?)	3½"	-	-	No tai-

(d) GENERAL BOMBARDMENT.

S.C.50 kg. General Bombardment.	202 KrL21-8-39 II 31 V.0 229 1939.	43"	8"	4m/m 8m/m Depending upon construction.	Drawn steel tube with welded on nose or cast steel	Sheet steel or Light alloy.
S.C. 250 kg. General Bombardment.	218 A Kr L 438 10 1937 33 B 60 L 1937 (15) 1937 14	5'	14"	0.3" 0.25" Depending upon construction.	Welded steel "one piece" or "built up" construction.	M.S. Sheet.
S.C.500 kg. General Bombardment.	-	7'	18"	4 m/m	-	-
S.D.500 kg.	-	-	-	Thick wall	-	-
S.D.1000 kg (Esau).	-	-	-	Thick wall	-	-
S.C. 1000 k.g. (Hermann) General Bombardment.	-	-	-	Thin wall	-	-
S.D.1400 kg. (Fritz)	-	-	-	Thick wall	-	-
S.C.1700 kg.	-	-	-	Thin wall	-	-
S.C.1800 kg. (Satan)	-	-	-	Thin wall	-	-

AIRCRAFT BOMBS.

Explosive or Incendiary Filling.	Weight Filling.	Total Weight.	C/W Ratio	Fuze	Exploder	Remarks
T.N.T. plus smoke composition. (Phosphorus and Paraffin)	2 kg.	10 kg.	20%	D.a.Percussion with clockwork arming. (Delay 2.5 secs)	-	I.O.O.Bulletin No.5.
do.	do.	do.	do.	"Allways" with 2 secs. delay.	-	do.
T.N.T. (cast)	54 lbs. or 36 lbs.	113 lbs.	48% or 31%	Rheinmetall electric No.15.	6.8 ozs. pressed pellets picric acid	O.B.Proc. Q 41.
T.N.T.	136 kg.	250 kg.	54%	Rheinmetall electric Nos.15,17,25, 28,38,50 and 55.	Pressed picric acid pellets. Primer either of five or twelve T.N.T. pellets 2.75" long by 2.4" diam.	I.O.O.Bulletin No.5. O.B.Procs.6470 6533 8270
T.N.T.	270 kg.	500 kg.	50%	-	-	I.O.O.Bulletin No.5.
-	-	-	-	-	-	Information obtained from Ballistic Tables recovered from Heinkel. S.C. denotes "Spreng Cylindisch" or Cylindrical H.E. S.D. denotes "Spreng Dictenwand". Thick wall H.E. bombs. The heavier type of S.C.bombs when used for the attack of ships are fitted with a flat retarder rim at the nose end to reduce penetration into water.
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	

No.155.
(Contd.)

PARTICULARS OF GERMAN

c) ANTI-SHIP.

Designation	Typical markings.	Max. Dimensions. Length	Max. Dimensions. Diam.	Wall Thick-ness.	Material of Body.	Material of Tail.
50 kg. Anti-submarine	-	-	-	-	-	-
100 kg. Anti-submarine	-	-	-	-	-	-
125 kg. Anti-submarine	-	-	-	-	-	-
125 kg. Armour-piercing.	-	-	-	-	-	-
250 kg. Armour-piercing.	-	-	-	-	-	-
500 kg. Armour-piercing.	-	4½'-5'	20"	1.75"	Chom-Mo-Van.	Light alloy.
850 kg. Aeroplane Torpedo.	-	5.85m.	45 /m	-	-	-

No.156.

DETAILS OF GERMAN

With reference to Item No.138 the table of German electric fuzes should be amended in the following particulars:-

No. of Fuze	Bomb used in	Description	Marking	Typical subsiduary markings.
17	H.E. bombs	Long delay fuze with clockwork mechanism giving delay up to 250 hrs. or longer.	EL A.Z. (17)	Rhs 1940
25	"	Modified edition of the No.15 fuze, with alternative D.A. or delay of 0.5 and 15 sec's. The 0.5 secs. delay can be cut out by a switch.	EL A.Z. (25)	RhS 195 1940
26	110 Kg. incendiary bomb.	D.A. fuze with air pressure and impact switches.	EL A.Z. (26)	RhS 1939 15 b.
50	H.E. bombs.	ELECTRICAL BOOBY TRAP.	50	None
55	"	General purpose H.E. bomb fuze with alternative D.A. or 12 sec's delay.	EL A.Z. (55)	RhS 1940

AIRCRAFT BOMBS.

Explosive or Incendiary Filling.	Weight Filling.	Total Weight.	C/W Ratio.	Fuze	Exploder	Remarks
-	-	-	-	Delay action for depth of 15 and 25 metres.	-	-
-	-	-	-	do.	-	-
-	-	-	-	do.	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
T.N.T.	130 kg.	500 kg.	26%	-	-	-
T.N.T.	185 kg.	-	-	-	-	Dropped from Height 18 m. Speed 50 knots over a distance of 2,000m.

(RHEINMETALL) ELECTRIC FUZES.

Colour	Remarks
Body of fuze unpainted or dark grey. Clockwork unit unpainted with rubber band.	A detector, e.g. stethoscope or microphone, should be applied after 250 hrs. to ascertain if the clockwork is running. If so, bomb should be left for an additional period of 90 hours and detector again applied. If clockwork is still heard, test should be repeated at intervals of 90 hrs. until clockwork is no longer working.
Dark Grey.	See Note 1.
Green.	See Notes 1 and 2.
Green (may be other colours).	Discharging apparatus must NOT be used. Fuze has anti-handling device and bomb containing it must NOT be moved. Probably safe without discharging after 48 hours and definitely safe after 60 hours.
Top and bottom dark grey. Body rust proofed sheet iron.	See Note 1.

No.156. DETAILS OF GERMAN (RHEINMETALL) ELECTRIC FUZES. - (Continued)
(contd)

NOTE 1. The standard two-pin discharging apparatus can be used to discharge fuzes Nos.15 and 26.

To discharge fuzes Nos.25, 28, 38 and 55 the standard discharging apparatus must be modified so that each plunger in the fuze can be depressed separately. The procedure for each fuze is given below:-

No.25. Depress each plunger separately and discharge with discharger for 3 minutes each. Repeat once.

No.28. Depress each plunger separately and discharge with discharger for 30 seconds each. Repeat once.

No.38. Depress each plunger separately and discharge with discharger for 1 minute each. Repeat once.

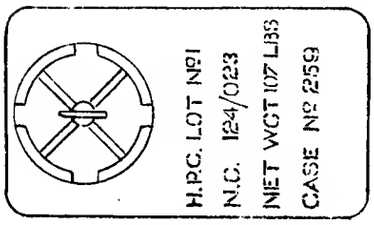
No.55. Depress each plunger separately and discharge with discharger for 30 seconds each. Repeat once.

NOTE 2. Fuze No.26 has one charging plunger and one dummy plunger. It must be discharged by the standard two-pin discharging apparatus for 10 seconds, followed by an interval of 10 seconds during which the plungers are released. This procedure should be repeated three times.

NOTE 3. For fuzes Nos.15, 25, 28, 38 and 55 the charging arrangements in the aircraft permit the selection of the D.A. or the delay condition, but it is only in fuze No.25 that the actual delay can be chosen prior to the release of the bomb. In the other fuzes, when the delay condition has been selected, the particular delay depends on the height of release from the aircraft.

FIG. 35.

HERCULES



TOP

16"

9"

29"

SMOKELESS POWDER
FOR CANNON

H.P.C. LOT Nº1

N.C. 124/023

SMOKELESS POWDER
FOR CANNON
H.P.C. LOT Nº1
N.C. 124/023

FRONT

SIDE

CANNON POWDER

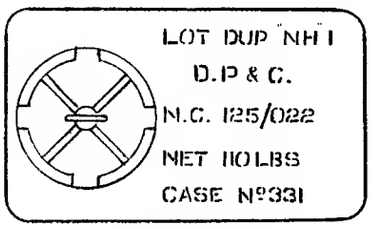
M
S
U
A-148

SPLY/X/09/40

BACK

Stencilling in
7/16 letters

DUPONT



TOP

16"

9"

29"

SMOKELESS POWDER FOR CANNON
D.P & C. LOT DUP NH 1
N C 125/022
GROSS 151 LBS
TARE 41 LBS
NET 110 LBS
JUNE 1940

SMOKELESS POWDER FOR CANNON
D.P. & C. LOT DUP NH 1
N C 125/022

FRONT

SIDE

SMOKELESS POWDER FOR CANNON

M
S
U
A-174

DEMAND Nº SPLY/X/09/40
MADE IN U.S.A.

BACK

Stencilling in
3/4" letters (approx)

NOTE :- There is a 2inch rim flange at the top and bottom of these containers. The flange is included in the dimensions of the front, back and sides as shown. Dimensions are only approximate. Junctions of front, sides and back are rounded off. There is a vertical weld mark down one side. Thickness of walls is about 3/32". Material is galvanised iron or steel.

R.3056

FIG. 36.

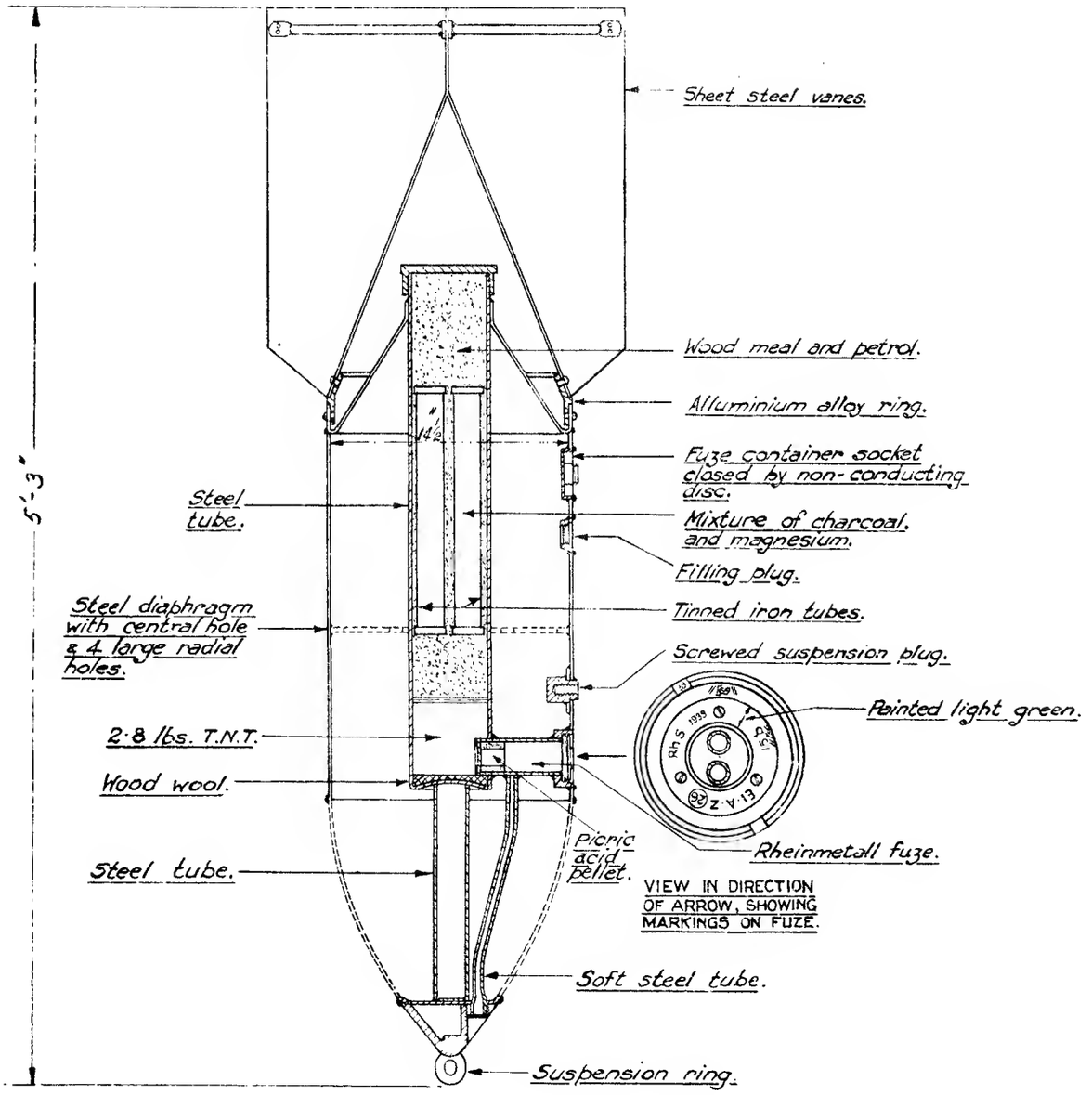
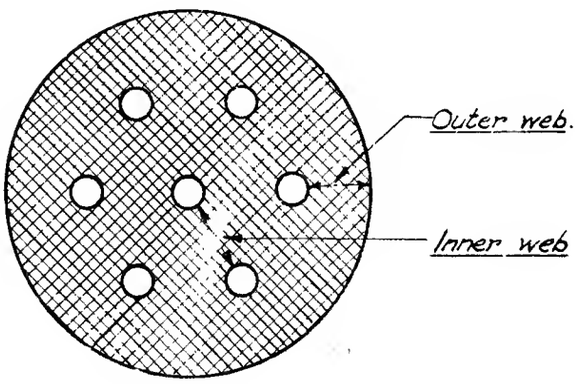
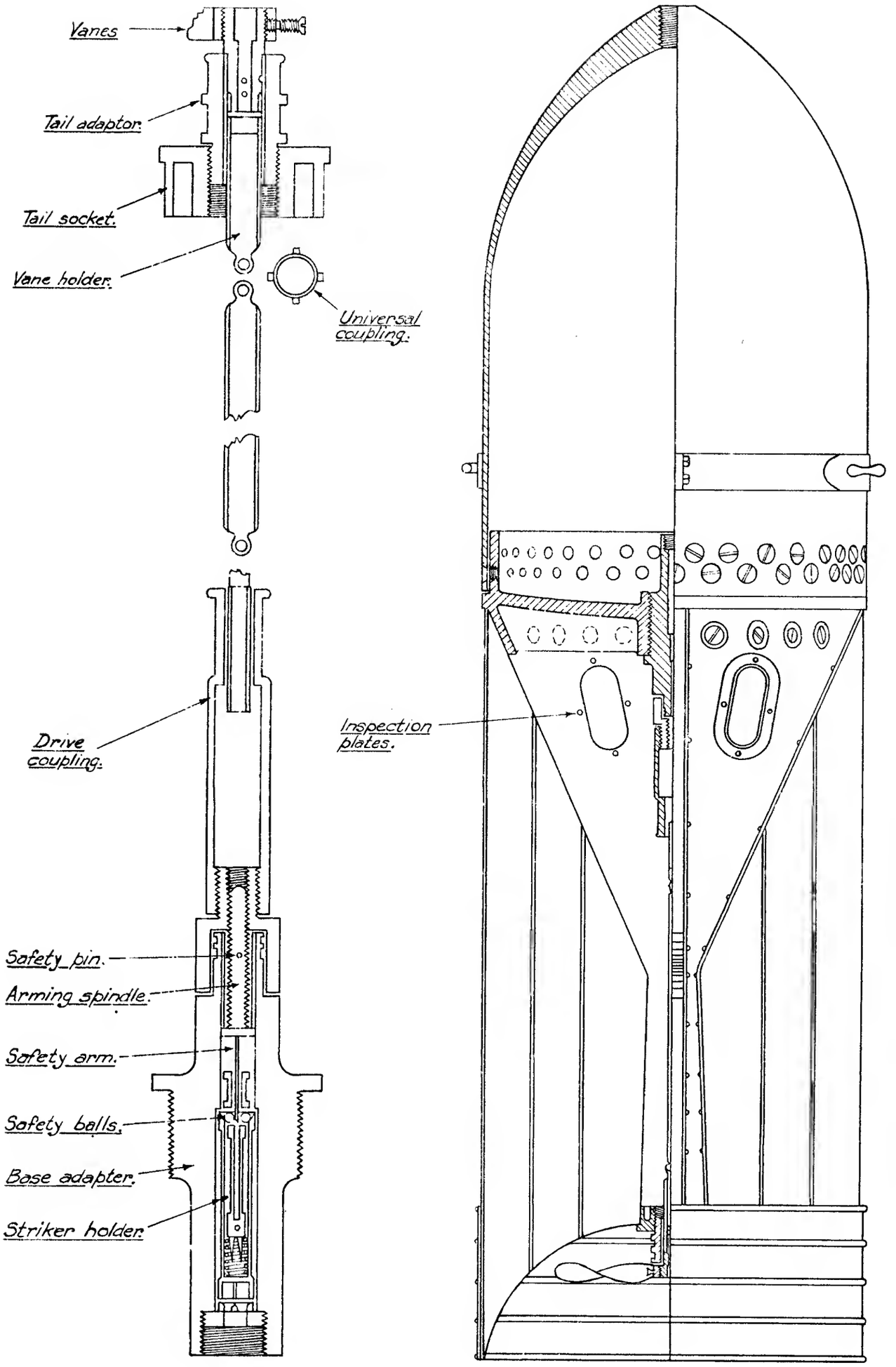


FIG. 37.



SECTION OF N.C.T.

FIG. 33.


Vanes
Tail adaptor.
Tail socket.
Vane holder.
Universal coupling.
Drive coupling.
Safety pin.
Arming spindle.
Safety arm.
Safety balls.
Base adapter.
Striker holder.
Inspection plates.